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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/611,634	06/30/2003	Jeffrey A. Aaron	190206-1170	1410
38823	7590	03/29/2006	EXAMINER	
THOMAS, KAYDEN, HORSTEMEYER & RISLEY, LLP/ BELLSOUTH I.P. CORP 100 GALLERIA PARKWAY SUITE 1750 ATLANTA, GA 30339			MEHRMANESH, ELMIRA	
			ART UNIT	PAPER NUMBER
			2113	

DATE MAILED: 03/29/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

<b>Office Action Summary</b>	<b>Application No.</b>	<b>Applicant(s)</b>	
	10/611,634	AARON, JEFFREY A.	
	<b>Examiner</b>	<b>Art Unit</b>	
	Elmira Mehrmanesh	2113	

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --**

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 June 2003.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-25 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-25 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 June 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |   |   |
|---|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)             | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)    | Paper No(s)/Mail Date. _____  |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date _____   | 6) <input type="checkbox"/> Other: _____                                    |

### **DETAILED ACTION**

The application of Aaron, for an "Automated diagnosis for electronic systems" filed June 30, 2003, has been examined.

Claims 1-25 are presented for examination.

Claims 8-25 are rejected under 35 USC § 101.

Claims 1-25 are rejected under 35 USC § 102.

### ***Claim Rejections - 35 USC § 101***

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 8-25 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As per claims 8-13, the claims are not limited to tangible embodiments. In view of Applicant's disclosure, specification on page 7, the medium is not limited to tangible embodiments, instead being defined as including both tangible embodiments (e.g., specification page 7, floppy disk, CD) and intangible embodiments (e.g., specification page 7, optical fiber, or paper which implies the use of intangible media such as signals, carrier waves, transmissions). As such, the claim is not limited to statutory subject matter and is therefore non-statutory.

As per claim 14, the limitation of "System", is non-statutory, since it is not tangibly embodied. The claim language is directed to an arrangement of software.

A claimed "*module configured...*" is not of statutory subject matter. A module configured to perform a method is merely a software arrangement. The configuration of the operating system is a computer program claimed as computer listings per se, i.e., the descriptions or expressions of the programs are not physical "things." They are neither computer components nor statutory processes, as they are not "acts" being performed. Such claimed computer programs do not define any structural and functional interrelationships between the computer program and other claimed elements of a computer, which permit the computer program's functionality to be realized.

As per claims 17, and 23-25, a claimed limitation of "*database*" is not of statutory subject matter.

A claimed database representing descriptive material per se or computer programs representing computer listings per se data structures not claimed as embodied in computer-readable media are descriptive material and are not statutory because they are not capable of causing functional change in the computer.

Applicants can refer to [http://10.117.7.228/Legal/guidelines101\\_20051026.pdf](http://10.117.7.228/Legal/guidelines101_20051026.pdf) for the Interim Guidelines for Examination of Patent Applications for Patent Subject Matter Eligibility.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-25 are rejected under 35 U.S.C. 102(b) as being anticipated by La Pierre (U.S. Patent No. 5,951,611).

As per claim 1, La Pierre discloses a method for providing automated diagnosis (col. 3, lines 50-55) of problems for an electronic system, comprising:

Identifying recent configuration changes made to the electronic system that fall within pre-established parameters (Fig. 1, element 16 and col. 4, lines 13-17)

Ranking the identified changes into potential causes (Fig. 1, element 18 and col. 4, lines 63-67 through col. 5, lines 1-10)

Verifying ranked potential causes to determine whether any of the ranked potential causes may be an actual cause or contributor to the problem (col. 5, lines 24-33)

And calculating distances (col. 4, lines 37-39) associated with the ranked potential causes that correspond to a relative likelihood that potential causes (Fig. 1; element 12 and col. 5, lines 24-33) may be a true cause (col. 3, lines 55-61).

As per claim 2, La Pierre discloses formulating a list of possible causes based on or ordered in terms of the distances and presenting the list to a user (col. 5, lines 3-6, and 14-17 and col. 3, lines 55-61).

As per claim 3, La Pierre discloses discarding the ranked potential causes that violate a configurable distance threshold (col. 3, lines 66-67 through col. 4, lines 1-3).

As per claim 4, La Pierre discloses recording policy or configuration changes that occur (col. 5, lines 1-17).

As per claim 5, La Pierre discloses accumulating and ranking potential causes until all potential causes associated with the problem are received (col. 4, lines 25-60).

As per claim 6, La Pierre discloses searching a database having user records, vulnerability and reliability data to verify the potential causes (col. 4, lines 61-67 through col. 5, lines 1-10).

As per claim 7, La Pierre discloses interpreting the electronic system's policies as needed to complete the verifying step (Fig. 1, element 18).

As per claim 8, La Pierre discloses a computer-readable medium having a program for providing automated diagnosis of problems (col. 3, lines 50-55) for an electronic system, for performing the steps of:

Logic configured to identify recent configuration changes made to the electronic system that fall within pre-established parameters (Fig. 1, element 16 and col. 4, lines 13-17)

Logic configured to rank the identified changes into potential causes (Fig. 1, element 18 and col. 4, lines 63-67 through col. 5, lines 1-10)

Logic configured to verify ranked potential causes to determine whether any of the ranked potential causes may be an actual cause or contributor to the problem (col. 5, lines 24-33)

And logic configured to calculate distances (col. 4, lines 37-39) associated with the ranked potential causes that correspond to a relative likelihood that potential causes (Fig. 1, element 12 and col. 5, lines 24-33) may be a true cause (col. 3, lines 55-61).

As per claim 9, La Pierre discloses logic configured to formulate a list of possible causes based on the distances and logic configured to present the list to a user (col. 5, lines 3-6, and 14-17 and col. 3, lines 55-61).

As per claim 10, La Pierre discloses logic configured to discard the ranked potential causes that violate a configurable distance threshold (col. 3, lines 66-67 through col. 4, lines 1-3).

As per claim 11, La Pierre discloses logic configured to record policy or configuration changes that occur (col. 5, lines 1-17).

As per claim 12, La Pierre discloses logic configured to accumulate and rank the potential causes until all potential causes associated with the problem are received (col. 4, lines 25-60).

As per claim 13, La Pierre discloses logic configured to search a database having user records, vulnerability and reliability data to verify the potential causes (col. 4, lines 61-67 through col. 5, lines 1-10).

As per claim 14, La Pierre discloses a system for providing automated diagnosis of problems (col. 3, lines 50-55) for an electronic system, comprising:

A central diagnosis engine (Fig. 1) configured to include:

A rank estimator module configured to rank identified changes into potential causes (Fig. 1, element 18 and col. 4, lines 63-67 through col. 5, lines 1-10)

A verifier module configured to verify ranked potential causes to determine whether any of the ranked potential causes may be an actual cause or contributor to the problem (col. 5, lines 24-33)

And a distance (col. 4, lines 37-39) estimator module configured to calculate distances associated with the ranked potential causes that correspond to a relative likelihood that potential causes (Fig. 1, element 12 and col. 5, lines 24-33) may be a true cause (col. 3, lines 55-61)

And an adaptive logger operative coupled to the central diagnosis engine, the adaptive logger is configured to record policy or configuration changes made to the electronic system that fall within pre-established parameters (col. 4, lines 53-67 through col. 5, lines 1-17).



As per claim 15, La Pierre discloses an input parser/filter module operatively coupled to the central diagnosis engine (col. 2, lines 47-51), the input parser/filter including logic configured to receive policy or profile input from a user's processing device or policy-management systems and to convert the input into data usable by the central diagnosis engine (col. 5, lines 52-61).

As per claim 16, La Pierre discloses an input parser/filter module operatively coupled to the central diagnosis engine (col. 2, lines 47-51), the input parser/filter including logic configured to receive a problem indication and descriptive information from sensor and monitoring systems and to convert that input into data usable by the central diagnosis engine (col. 3, lines 48-58).

As per claim 17, La Pierre discloses a database populated with descriptive system information and a database structure configured as hierarchical database pages, each database page having a page index, data section and selector section, and wherein the data section is further configured to include the element reliability or vulnerability information and the selector section is further configured to include links to related database pages (col. 4, lines 66-67 through col. 5, lines 1-6).

As per claim 18, La Pierre discloses a problem accumulator module configured to receive problem data from the input parser/filter module (col. 2, lines 47-51) and to

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continue receive data until the problem is fully described (col. 5, lines 18-30).

As per claim 19, La Pierre discloses the central diagnosis engine further comprises a cause estimator module configured to interface with the adaptive logger and to identify any changes in policy or configuration associated with any available parameters of the problem (col. 5, lines 3-17).

As per claim 20, La Pierre discloses a possible cause accumulator module configured to receive and accumulate potential causes and rankings from the rank estimator module until the ranking is complete and potential causes associated with the problem are received (Fig. 1, element 18).

As per claim 21, La Pierre discloses a policy interpreter module configured to provide details on the electronic system's configuration to the verifier module as needed in the verification process (Fig. 1, element 18).

As per claim 22, La Pierre discloses a presentation module operatively coupled to the central diagnosis engine and a user's processing device through a communications network, the presentation module configured to summarize and format at least one of accumulated possible causes, distances, probabilities, related reliability or vulnerability results for utilization by the user's processing device (Fig. 3A and 3B).

As per claim 23, La Pierre discloses a database interface module operatively coupled between the database, the database structure, and the central diagnosis engine, the database interface module configured to enable provisioning and access to the database and the database structure (Fig. 3A and 3B and (col. 4, lines 66-67 through col. 5, lines 1-6).

As per claim 24, La Pierre discloses the database comprises an element descriptive database (EDD) (Fig. 3A and 3B and (col. 4, lines 66-67 through col. 5, lines 1-6).

As per claim 25, La Pierre discloses the database structure comprises a hierarchical vulnerability database (HVD) structure (Fig. 3A and 3B and (col. 4, lines 66-67 through col. 5, lines 1-6).

### **Related Prior Art**

The following prior art is considered to be pertinent to applicant's invention, but nor relied upon for claim analysis conducted above.

Devan et al. (U.S. Patent No. 6,125,458), "Fault management system for a telecommunications network".

Ishiyama (U.S. Patent No. 5,968,195), "Estimation of failure section region with small simulation calculation quantity".

Ishiyama et al. (U.S. Patent No. 5,640,403), "Fault diagnosis method for a sequential circuit".


Keeble et al. (U.S. Patent No. 6,128,753), "Fault management system for a telecommunications network".

### Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elmira Mehrmanesh whose telephone number is (571) 272-5531. The examiner can normally be reached on 8-5 M-F.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert W. Beausoliel can be reached on (571) 272-3645. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

  
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